R. JAMES HAMMONTREE, P.E., P.S. BRUCE M. BAIR, P.E., P.S. LAWRENCE D. PHILLIPS, P.F. P.S. CHARLES F. HAMMONTPEE, P.E., P.S. RONALD P. DOHY, P.S. GARY L. TOUSSANT, P.S. JOSE E. TOLEDO, P.E., P.S. RICHARD R. COOK, P.E., P.S. JAMES C. BOLLIBON, P.E., P.S. KEITH A. BENNETT, P.E., P.S. BARBARA H. BENNETT, P.E., P.S.

HAMMONTREE & ASSOCIATES, LIMITED

Consulting Engineers - Planners - Surveyors

TREEMORE BUILDING 5233 STONEHAM ROAD NORTH CANTON, OHIO 44720

PHONE (216) 499-8817 FAX (216) 499-0149 TOLL FREE 1-800-394-8817 MICHAEL L. DECKER, P.S. RICHARO J. FAULHABER, P.E., P.S. GREGORY E. MENCER, A.P.A. DANIEL J. GRINSTEAD, P.E. MARK E. FRANZEN, P.E. KARL J. OPRISCH, P.E. JEFFREY L SPRAY, P.S. PAUL A. TOMIC, P.S. WILLIAM N. CLARK, P.E., P.S. THOMAS J. KING, P.S. DOMINIC A. MARTUCCIO, P.E., P.S. PAUL K. MILLER, P.S. DAVID T. MILLER, P.S.

October 2, 1995

1 (c)(d)(e)

The Critter Company 6890 East Sunrise Drive #120-10 Tucson, Arizona 85715

Attention:

Jerry Coon

Subject:

Change Order requests

dated September 20, 1995

Change Order Number: BIO-LAG 1-1 Change Order Number: BIO-LAG 1-2

Payment Schedule

Prior to responding to your change order request I will review the current contract agreement. The Critter Company (TCC) and Canton Drop Forge (CDF) entered into in agreement in June of 1995, for bioremediation services. Under this contract TCC's responsibilities included the following:

- 1. Treatability study
- 2. Bioengineering services
- 3. All site preparation necessary for treatment; including coordination of bio-cellconstruction.
- 4. Labor and material for inoculating the material to be treated.
- 5. All earthmoving and watering during the duration of the project, including weekly or bi-weekly tilling of bio-cell material.
- 6. Reports and documentation procedure.
- 7. Permitting

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Mr. Jerry Coon October 2, 1995 Page 2

CDF and Hammontree & Associates, Ltd. (H&A) are responsible for:

- 1. Access to the treatment area (CDF).
- 2. Continuous water supply to the treatment area (CDF).
- 3. Soil sampling and testing including beginning, intermediate, and confirmation samples upon completion of the project (H&A)

We have reviewed and discussed the change order request with CDF. The following sections will address each item in your September 9, 1995 letter in order.

CHANGE ORDER - BIO-LAG 1-1, ITEM 1

The occurrence of scrap metal and debris at a forge company should have been expected and should not come as a surprise. TCC personnel were able to visit the CDF property including Lagoon #1 and the bio-cell site. In fact CDF personnel drew attention to the probable presence of such material to TCC.

TCC is considered the expert in determining the suitability of materials for bioremediation. As indicated by TCC, two factors which determine the suitability are the biodegradability of a material and the physical make up of a material. The investigation of these items was TCC's responsibility.

Based on these items, CHANGE ORDER BIO-LAG 1-1, ITEM 1 is rejected.

CHANGE ORDER - BIO-LAG 1-1, ITEM 2

In the January 6, 1995, letter from TCC to H&A it is clear that TCC intended to be the party responsible for all earthmoving and watering during the project. In the report title "Lagoon #1 Sludge Disposal/Treatment Options", page 4 lists tilling of the bio-cell as part of TCC's responsibilities. This statement was included in the report as a result of your January 6, 1995 letter. The Critter Company received a copy of this report and was aware of each parties responsibilities during the project.

An April 28, 1995 Critter Company's letter also acknowledges TCC as the party responsible for tilling of the bio-cell.

Items 5 and 6 in the April 28, 1995 Critter Company letter indicate TCC's acceptance of performance based payments and the need for a mutually agreeable payment schedule. As requested by TCC and agreed to by Canton Drop Forge, payments based on performance were used in lieu of performance bond which you could not or would not provide.

Mr. Jerry Coon October 2, 1995 Page 3

Direct payment to an "aeration contractor" is not acceptable. The tilling is included in the bid price of \$12/c.y. as listed on page 13 of the contract.

CHANGE ORDER: BIO-LAG 1-2, ITEM 1

In the January 6, 1995, letter from TCC it is clear that TCC will be responsible for the treatability study required for the project. Nowhere in that letter does it indicate that Hammontree & Associates or Canton Drop Forge was responsible for determining treatability. Hammontree & Associates is responsible for beginning, intermediate, and confirmation samples. Hammontree did retrieve and test materials lining Lagoon #1 as part of the preparation of "Lagoon #1 Sludge Disposal Treatment Options". As indicated on page 1 of that report the intent of that investigation was to determine whether the material was hazardous and/or biodegradable. This goal was met. Nowhere in this report does it indicate that the samples tested were representative of the average material. During sample retrieval attempts were made to pass through the bulk of the obviously contaminated material and into a "clean" layer to determine the physical limits of contamination and aid in treatment quantity estimation.

TCC was given samples of both the lining material and the material from the center of the sludge layer. TCC did not test these samples for TPH.

It was TCC's responsibility to verify contamination levels. Page 4 of "Lagoon #1 Sludge Disposal/Treatment Options" does indicate that Hammontree & Associates is to sample as required by TCC during remediation, however, Page 1 of Contract 95-2A states that initial contamination concentrations shall be established by five (5) random samples from the bio-cell material.

CHANGE ORDER: BIO-LAG 1-2, ITEM 2

The time frame shall be as stated in the contract documents. Altering the completion of work date is not acceptable to CDF.

CHANGE ORDER: BIO-LAG 1-2, ITEM 3

No comment required since Items 1 and 2 are not acceptable to CDF.

CHANGE ORDER: BIO-LAG 1-2, ITEM 4

No comment required. TCC is expected to conform to the contract documents.

Mr. Jerry Coon October 2, 1995 Page 4

PAYMENT SCHEDULE

There is no justification for altering the payment schedule. The payment schedule in Contract 95-2A is very clear and mutually agreed upon. This type of payment schedule was requested by TCC in lieu of a performance bond. The only payments that fall outside of this schedule will be for work that is not covered in the contract document.

Also, I am requesting that five feet of clearance be maintained between the bio-cell material and the existing monitoring well. This was agreed to in preliminary bioremediation discussions.

Sincerely,

HAMMONTREE & ASSOCIATES, LIMITED

Gene G. Hill, E.I.T., M.S.

CRITTER COMPANY CHANGE ORDER REQUEST

September 20, 1995

HE CRITTER COMPA Biological Remediation of Hydrocarbons

6890 E. Sunrise Drive #120-10 Tucson, Arizona 85715 (520) 299-9808

MEMORANDUM

To:

Gene Hill

From:

Jerry Coon

Date:

September 20, 1995

Subject:

Change Orders

- 1. Here are the requested changes we initially discussed in you office. We are again addressing the soil as one issue and the higher contaminant levels as the other. I have outlined two payment options. If you have other ones to suggest, please call me.
- 2. The money to be received upon execution of the changes reflects greatly increased costs to prepare for the project. I have had to alter my technique considerably from what I had initially planned on. I really have to treat what is in the cell as opposed to what we thought was in the cell. If we were to terminate the project at this time, I would anticipate preparing a statement for approximately \$38,000 for work performed to date. Option 2 should be the most attractive as it closely ties our performance with our pay. Either is acceptable to me
- 3. Regarding the soil aeration, this Saturday we will try a "Bog Harrow" which will be delivered to the site from Kentucky. I am unfamiliar with this, as is Stan Evans, but I am told it will aerate to a depth of 18 inches and be impervious to the scrap metal which came from Lagoon #1. The Brown Bear aerator which we used is outstanding but is very expensive. Let's see how the Bog Harrow works and make a decision at that time.
- 4. We are experiencing difficulty in getting paid for work done to date. I know our attorneys have discussed this however a sixty day pay period on top of the lengthy bioremediation process is far excessive and needs to be changed. This is not part of their production process, is not classified as Cost of Goods Sold, and the money is set aside in escrow. Under normal conditions, this should be released immediately when the work is completed.
- Again, call if you have some input or need clarification on these issues.

CC: Scott Klingensmith

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THE CRITTER COMPANY Biological Remediation of Hydrocarbons

6890 E. Sunrise Drive #120-10 Tucson, Arizona 85715 (520) 299-9808

CHANGE ORDER

PROJECT

Canton Drop Forge

4575 Southway St., S. W.

P.O. Box 6902

Canton, Ohio 44706

CHANGE ORDER

NUMBER: BIO-LAG 1-1

DATE: 09/19/95

TO ENGINEER:

Hammontree & Associates

5233 Stoneham Rd.

North Canton, Ohio 44720

CONTRACT ORIGINALLY FOR: Bioremediation of oil contaminated soil from

Lagoons #1 and #2.

The Contract is changed as follows: Pursuant to section 4.2.3 of the contract, The Critter Company, Inc. is requiring that this change order be approved.

- 1. Upon discovery by Beaver Excavation that debris was located in Lagoon # 1, and subsequently moved to the Bio Cell and as evidenced by visual observation by The Critter Company and as further evidenced by Mr. Larry Philyaw of Midwest Auger-Aerator (copy of letter attached and photographs taken by him available), the following change order is required.
- 2. All costs for soil aeration and movement during the bioremediation treatment from Lagoon # 1 shall be paid by Canton Drop Forge. Aeration shall be twice weekly by a method approved by The Critter Company but shall be paid directly by Canton Drop Forge to the contractor/equipment operator. As aeration is essential to a bioremediation project of this high contaminant level, aeration shall commence as soon as possible upon execution of this change order.

ACCEPTED BY:

Canton Drop Forge

Hammontree & Associates

The Critter Company

By:

Date:

By:

Date: CDF000978

By:

Data:

Jerenge Coon 9/20/95

SCIL ALDITION (TILLING) WAS INCLUDED IN THE MIRROR FOND OF MINIMALLY ED - NOW IN MINISTER TO SEEDING IT APPLINGREAGE TREATMENT

THE CRITTER COMPANY Biological Remediation of Hydrocarbons

6890 E. Sunrise Drive #120-10 Tucson, Arizona 85715 (520) 299-9808

CHANGE ORDER

PROJECT

Canton Drop Forge

4575 Southway St., S. W.

P.O. Box 6902

Canton, Ohio 44706

CHANGE ORDER

NUMBER: BIO-LAG 1-2

DATE: 09/20/95

TO ENGINEER:

Hammontree & Associates

5233 Stoneham Rd.

North Canton, Ohio 44720

CONTRACT ORIGINALLY FOR: Bioremediation of oil contaminated soil from Lagoons #1 and #2.

The Contract is changed as follows: Pursuant to section 4.2.3 of the contract, The Critter Company, Inc. is requiring that this change order be approved.

- 1. Upon confirmation from Hammontree & Associates, LTD, contamination levels of the material from Lagoon # 1 were on average three times the levels reported to The Critter Company (TCC) in analytical reports prepared by Hammontree & Associates, LTD. (Hammontree) prior to TCC bidding this project. Due to the extremely high contamination levels, TCC requires that the price to continue treating the 3000 cubic yards in the Bio-Cell be increased to \$26 per cubic yard.
- 2. Due to the high contamination levels in the Bio-Cell, TCC cannot be responsible for completing this project in two years. However, TCC will continue to treat the soil in the Bio-Cell until target levels are reached.
- 3. This change order is only for the 3,000 cubic yards in the Bio-Cell and is contingent upon acceptance of Change Order #BIO-LAG 1-1 and #BIO-LAG 1-2.
- 4. TCC has and will continue to manufacture microbes and treat the Bio-Cell while these change orders are reviewed and approved.

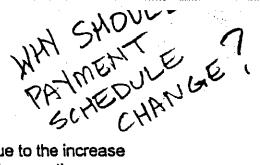
CDF000979

REVICED! \$ 26.00/24 & 3000 CY = \$ 36,000

REVICED! \$ 26.00/24 & 3000 CY = \$78,000

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Page 2.



PAYMENT SCHEDULE

One of the following payment schedule Options is required due to the increase in contamination levels resulting in anticipated increases in clean-up time, increases in production and labor costs and increases in research and development required to handle the difficulty of the contaminant and the site.

OPTION 1.

- 1. \$4,800 (Billed July 26, 1995) to be paid immediately.
- 2. \$21,000 due upon acceptance of this change order.
- 3. Three monthly payments of \$7,000 due October 30, 1995, November 30, 1995 and December 30, 1995.
- 4. Balance due of \$36,000 when levels of contamination reach target levels as specified in Bid Specifications. (Net 20 days)

OPTION 2.

- 1. \$4,800 (Billed July 26, 1995) to be paid immediately.
- 2. \$25,000 due upon acceptance of this change order.
- 3. 40% of balance (Lagoon #1 only) due when contamination levels have dropped to 25% of original levels. Net 20 days.
- 4. 25% of balance (Lagoon #1 only) when contamination levels have dropped to 50% of original levels. Net 20 days.
- 5. 25% of balance (Lagoon #1 only) when contamination levels have dropped to 75% of original levels. Net 20 days.
- 5. Remainder of balance (Lagoon #1 only) due when contamination levels have reached target levels. Net 20 days.

EXPIRATION DATE: September 30, 1995

As time is of the essence to continue treatment prior to colder temperatures, should this change order not be executed by the expiration date, TCC will submit a statement for work performed to date pursuant to Ohio Statutes.

ACCEPTED BY:

Canton Drop Forge	Hammontree & Associates	The Critter Company
By: Date:	By: Date:	By: Date: 9/20/95

2 (b) 3

September 5, 1995

Jerry Coon Critter Co. 6890 E. Sunrise Dr. #120-10 Tucson, AZ

Dear Jerry:

After visiting the job site at Canton, I would agree that the Brown Bear would definitely be the best tool for this project, but because of the extremely harsh working environment, I am quite concerned about damage to the machine. I am enclosing some photos we took of just a few items that can ruin tires, bend/break the auger, and take out the auger drive bearings and seals. We found numerous rocks and chunks of concrete large enough to do such damage. In addition, there are all kinds of metal stakes, shards, plate stock, I-beams, etc., plus cable that will wrap up on the auger and destroy seals and bearings.

You can expect extraordinary costs of operation due to these hazards, but it is difficult to tell you what to budget, because the extent of damage will be in direct relationship to how well the material is purged of these items before the Bear works there, and how careful the operator is in stopping and removing these items the instant they are turned up by the auger. Even without the extra damage, you will also have accelerated wear to the auger components due to the highly abrasive nature of the material.

We can rent you a Bear for this job for \$12,500 per month f.o.b. Pontiac, IL, and would also need a \$10,000 damage repair deposit to be applied toward the cost of any repairs the machine would need upon its return to our shop, to bring it back to the same condition as when it left, except for normal wear and tear. Additionally, the first month's rent and damage deposit must be received prior to shipment of the machine from our yard, and each subsequent month's rent is due at the start of the rental month. The rental period is from when the machine leaves our yard until it is returned, and upon the return inspection, any repairs needed will be paid for out of the \$10,000 deposit, with any balance being returned, or any additional being billed out. The machine is rented on a net net basis, meaning all operating costs and all repairs of any nature are the responsibility of the lessee.

Sales • Rentals • Parts • Service 18884N 1600E, P.O. Box 445 • Pontiac, Illinois 61764 • (815) 844-6400 Our normal option to purchase the machine is to allow 100% of the rentals paid in, to apply to the purchase price of \$79,500, if the unit is purchased within the first 30 days of the rental contract, or 90% if purchased within 90 days. Of course, if the purchase option is exercised, the \$10,000 damage repair deposit would also be applied to the selling price.

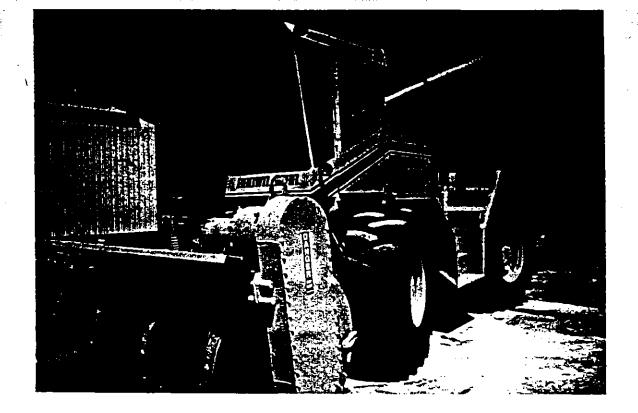
As for giving you some idea of what various costs might be, a set of 28.1-26 L1 tires will run about \$5000, an auger screw rebuild (wear plates, carbide teeth, hard facing, welding, etc.), will run \$2000-3000, auger bearings about \$1000-2000, and auger shaft replacement \$2000-3000. You may or may not have to bear these costs, as mentioned above, but I think I would allow something, especially enough for a set of tires and screw rebuild.

If you need any further information, please don't hesitate to call.

May book

Larry Philyaw

MIDWEST AUGER-AERATOR



BROWN BEAR I

STOCK # 1062

\$79,500

225 HP Brown Bear I w/10' Auger w/carbide cutting teeth. JD 6466A Diesel Engine. ROPS Cab w/Heater and Air Conditioning. Four Wheel Drive, Four Wheel Steering, with coordinated, crab & front-wheel-only steering modes. 28.1-26 L1 Forestry Tires, 75-80% Tread Remaining.

Machine completely rebuilt approximately 1500 hours ago, including hydraulic pumps & motors, differentials & axles. Recently gone through in shop, all systems checked, tested, & serviced or repaired as needed.

Available August 15, 1995. 30 day 50/50 warranty. Rent-purchase plan available.

RENTAL RATES: \$12,500/MO. 1 MO. MIN.

10,000/MO. 3 MO. MIN. 8,500/MO. 6 MO. MIN.



MIDWEST AUGER-RERRTOR

1-800-3294

CRITTER COMPANY LETTER

January 6, 1995

THE CRITTER COMPANY Biological Remediation of Hydrocarbons

4725 E. Sunrise Drive #412 Tucson, Arizona 85718 (602) 299-9808

January 6, 1995

Mr. Gene Hill Hammontree & Associates, LTD. 5233 Stoneham Rd. North Canton, Ohio 44720

RE: Bioremediation proposal to treat approximately 3000 cubic yards.

Dear Mr. Hill,

THE CRITTER COMPANY INC. (TCC) is pleased to submit this proposal for the bioremediation of contaminated soil at your site in Canton, Ohio. Our proposal is based on using naturally occurring microorganisms to breakdown the hydrocarbon contamination into harmless fatty acids, water, and carbon dioxide. TCC will augment the contaminated soil with microbes specifically selected for their ability to degrade petroleum. TCC will manufacture the microbial product in quantities required to treat the subject site. By controlling the manufacturing process, we insure that the plate count (microbes per gram) is maximized and degradation is accelerated.

Attached is a scope of work describing the proposed treatment process. If this proposal is accepted, TCC will bioengineer the system to address specific site conditions in detail.

This proposal is subject to the following:

TERMS & CONDITIONS:

- 1. A treatability study that shows our process will effectively degrade the contaminant.
- 2. This proposal is based on treating approximately 3000 cubic yards.
- 3. TCC will be responsible for the following:
 - a. Treatability study.
 - b. Bioengineering services.
 - c. All site preparation for treatment.
 - d. Labor and material for inoculating the soil.
 - e. All earthmoving and watering during project.
 - f. Reports and documentation procedure.

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Page 2. Proposal for Services.

- 4. Hammontree & Associates is responsible for the following:
 - a. Access to treatment area.
 - b. Continuous water supply to the treatment area.
 - c. Soil testing including beginning, intermediate, and confirmation samples upon completion of project.
 - d. Permitting (If required).

PRICE QUOTATION: \$69,000

Exhibits: Scope of Work

- 1. Payment of \$1,000 due upon acceptance of proposal.
- 2. 50% of balance (\$34,000) due at time of first inoculation.
- 3. Remainder of balance (\$34,000) due when the levels of contamination have reached closure levels.
- 4. Any substantial increase to the amount of contaminated soil will be billed at \$23 per cubic yard.
- 5. Price quotation includes total cost for The Critter Company regardless of project length or number of treatments.
- 6. Price quotation good for 90 days (April 6, 1995).

If you have any questions or need additional information, please do not hesitate to call me at (614) 431-8190 or Jerry Coon at (602) 299-9808. If this proposal is acceptable, please sign and return one copy.

Sincerely,	
THE CRITTER COMPANY, INC.	Accepted By:
Scott Klingermith	Signature:
Scott Klingensmith	Title:
Project Coordinator	Date:
-	

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Portions of

LAGOON #1 SLUDGE DISPOSAL/TREATMENT OPTIONS

Prepared For:

Canton Drop Forge 4575 Southway Street, S.W. Canton, Ohio 44706

February 1, 1995

Prepared by:

Hammontree & Associates, Limited 5233 Stoneham Road North Canton, Ohio 44720

I. INTRODUCTION

The following report addresses the settled materials found lining "Lagoon 1" at the Canton Drop Forge facility located on Southway Street S.W. in Canton, Ohio.

Currently the lagoon receives process cooling water and surface run-off from the forging facility. Both of these water sources are contaminated with petroleum products with the process cooling water being the major contributor of petroleum contamination to the lagoon. The management is in the process of investigating methods to remove oils and greases from the cooling water stream through industrial pretreatment. The tentative plan is to remove the materials lining the lagoon and maintain the site for future use as a stormwater and cooling water retention pond.

Sludge and sediment samples were retrieved from the lining of lagoon #1 to determine whether the material is considered hazardous and to investigate biodegradability. The materials found were non-hazardous and biodegradable. The materials were non-hazardous but high in Total Petroleum Hydrocarbons (TPH) (1,500 to 105,000 ppm). TPH contaminated soils are regulated by both the Environmental Protection Agency (EPA) and the Bureau of Underground Storage Tank Regulations (BUSTR). Technically the site is not subject to BUSTR regulations but to the often more stringent EPA regulations. However due to the industrial nature of the site the EPA may allow the BUSTR clean-up level of 105 ppm.

The most cost efficient means of handling TPH contaminated soils in this situation would be land filling and/or ex-situ bio-remediation. The optimum method(s) to use will depend on the management's preferences as well as the cost of clean up.

This report will discuss the materials found and Hammontree & Associates recommendations for the treatment of the material excavated from Lagoon #1.

II. SAMPLING

Sludge and sediment samples were retrieved from the bottom of lagoon #1 using both a "Mucksucker" and standard auger type sampler. Materials were retrieved from various locations and depths throughout the lagoon. Due to the similarity of the samples and the analytical results, exhaustive sampling was not justified. The only contamination above allowable levels was Total Petroleum Hydrocarbons (TPH). See Figure 1, Lagoon #1 Site Plan for sample locations.

III. LABORATORY ANALYSIS

All samples were tested for contaminates as outlined in the Resource Conservation and Recovery Act (RCRA). This includes the following:

1. Full Toxicity Leaching Characteristic Procedure (TCLP) (excluding herbicides & pesticides) This covers metals and organics for toxicity

HAMMONTREE & ASSOCIATES, LIMITED

CDF000988

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LAG# 1 SLUDGE DISPOSAL TREATMENT FEB. 1,1995 OPTIONS

- 2. Reactive Cyanide reactivity
- 3. Reactive Sulfur reactivity
- 4. Flash Point Ignitability
- 5. pH corrosivity
- 6. Paint Filter Liquids Test landfills require solid wastes
- 7. PCB's due to past detection (Governed under Toxic Substance Control Act) (TSCA)
- 8. Total Petroleum Hydrocarbons (TPH) due to oil and grease contamination

Table 1: Lab Analysis Summary shows the analysis performed and subsequent results

TABLE 1: LAB ANALYSIS SUMMARY

M I	Sample #	W-1	1	4	5	6	Regulatory Limit
CE	Reactive Cyanide (ppm)	<0.5	<0.5	<0.5	<0.5	<0.5	
	Reactive Sulfur (ppm)	<25	<25	<25	<25	<25	
L	Flash Point (°F)	97	>140	>140	>140	>140	
,	ρHσ	6.63	7.31	7.12	7.46	7.67	
N	Free Liquid (%)	0	0	0	0	0	N.Z
E	TPH (418.1) (ppm)	1510	1543	25,557	81,426	105,290	100
ŭ	DRO (8015) (ppm)	38	35	216	54	94	
s	PCB's (ppm)	<2	<2	<2	<u>C</u>	<2	
	Cresols (ppm)	0.10	<0.02	0.13	<0.02	0.07	200
	1, 4-Dichlorobenzene	<0.02	<0.02	<0.02	<0.02	0.03	7.5
	2, 4-Dinitrotoluene	<0.02	<0.02	<0.02	0.04	<0.02	0.13
Ţ	Hexachlorobenzene	<0.02	<0.02	<0.02	0.05	0.02	0.13
C L	Hexachloro-1, 3-butadiene	<0.015	0.50	<.02	0.02	0.08	0.5
P	Nitrobenzene	<0.02	<0.02	<0.02	<0.02	0.38	2
_	Pentachlorophenol	0.07	0.07	<0.05	<0.05	0.10	100
B N	Pyridine	<0.05	<0.05	<0.05	<0.05	<.05	5
A	2, 4, 5 Trichlorophenol	<0.05	<0.05	<0.05	<0.05	<.05	400
	2, 4, 6 Trichlorophenol	<0.05	<0.05	<0.05	<0.05	< 05	2
	Hexachloroethane	<0.02	<0.02	0.03	<0.02	0.05	3
T	Benzene	<0.05	<0.05	<0.05	< 0.05	<0.05	0.5
C L	Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	<0.05	0.5
P	Chlorobenzene	<0.05	<0.05	<0.05	<0.05	<0.05	100
v	Chloroform	<0.05	<0.05	<0.05	<0.05	<0.05	6
ŏ	1 - 1 - 1 - 1	<0.05	<0.05	<0.05	<0.05	<0.05	0.5
L	1 1. 1-Dicinoloculation	<0.05	<0.05	<0.05	<0.05	<0.05	0.7
A T		<.5	<.5	<.5	<.5	<.5	200
I		< 0.05	<0.05	<0.05	<0.05	<0.05	0.7
L E	Trichloroethene	< 0.05	<0.05	<0.05	<0.05	<0.05	0.5
S		< 0.05	<0.05	<0.05	<0.05	<0.05	0.2
Ţ	Silver	<0.01	<0.01	<0.01	<0.01	<0.01	5
C L P M E	7 3	<0.1	<0.1	<0.1	<0.1	1.0	5
		<.005	<.005	<.005	<.005	<.005	1
	Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	5
	4	< 0.001	0.003	0.008	<0.01	<0.001	.5
ī		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.2
A	Banum	1.5	<0.1	<0.1	23	15	100
L S		0.0005	0.03	<0.002	<0.002	<0.002	_ 1

Full Laboratory Analysis in Appendix B

-2-

VII. RECOMMENDATIONS

Based on the proposals received Hammontree & Associates recommends using the Critter Company to perform the service of bioremediation. Not only do they have lower costs, but they will repeat inoculations of nutrients and microbes until the clean-up is complete. Sunpro is more expensive and will charge over \$7,000.00 per inoculation after the fourth inoculation.

VIII. The Critter Company Proposal (see appendix D)

Bioremediate all 3,000 c.y. with a single bioremediation contract. One or two "batches" may be required based on the quantity excavated and the size of the biocell used.

The Critter Company (TCC) Responsibilities

- 1. Determine applicability of bioremediation.
- 2. Develop microbial and nutrient solutions required.
- 3. Design and construction of bio-cell.
- 4. Design and construct the required watering system.
- 5. Work with Hammontree & Associates in developing sampling plan.
- 6. Application of microbial and nutrient solutions to the contaminated soil.
- 7. Assess progress and determine modifications necessary.
- 8. Add filler to bio-cell as necessary.
- 9. Till soil as necessary.
- 10. Provide final documentation of results.

COST ESTIMATE = \$23.00/c.y.

<u>Hammontree & Associates Requirements</u>

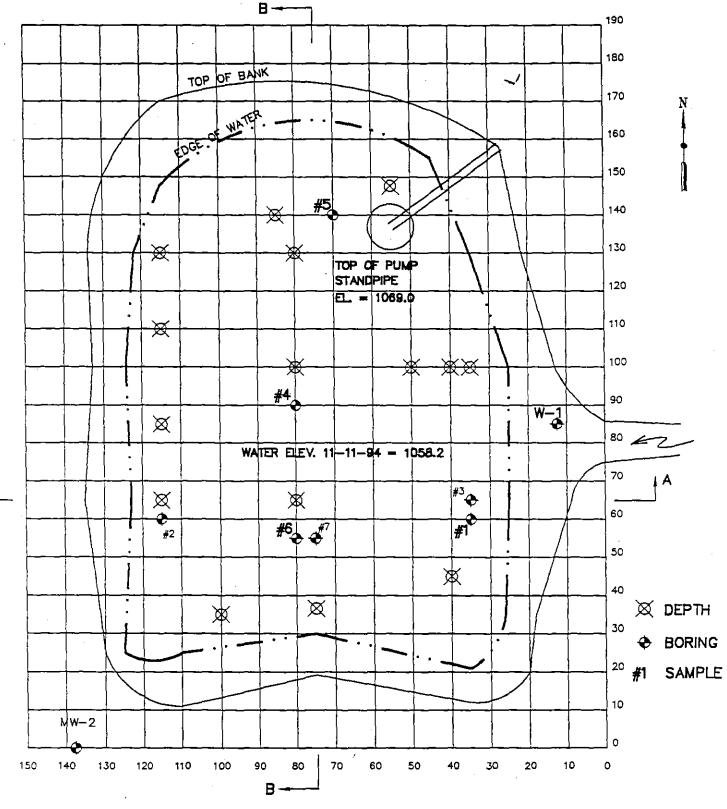
- 1. Coordinate activities as required.
- 2. Sample for Total Petroleum Hydrocarbons (TPH) as required by TCC.

COST ESTIMATE = \$120.00/sample

CDF Requirements

- 1. Determine suitable location for remediation site.
- 2. Provide access.
- 3. Provide Water.
- 4. Have legal group determine if permitting is required.

-4-HAMMONTREE & ASSOCIATES, LIMITED



SAMPLE LOCATIONS

- W-1: FROM THE SIDEWALL, A GRAVELLY SAMPLE
 - 1: THICK GREASE, ALMOST CLAY, COMPOSITE FROM 1.9' INTO MUCK AND 4.7' INTO MUCK
 - 4: SOFY CLAY (BLACK) TO FAIRLY CLEAN GREASE (APPROX. 2.5' TO 4.0' BELOW MUCK)
 - 5: DARK CLAY TO TAN CLAY 2.0' TO 2.5' BELOW MUCK
 - 6: GREASE TO BLACK CLAY 2.0' TO 3.0' BELOW MUCK

CDF000991

CRITTER COMPANY LETTER April 28, 1995

THE CRITTER COMPANY Biological Remediation of Hydrocarbons

6890 E. Sunrise Drive, #120-10 Tucson, Arizona 85715 (520) 299-9808

April 28, 1995

Mr. Keith Houseknect Canton Drop Forge 4575 Southway Street, S.W. P.O. Box 6902 Canton, Ohio 44706

RE: Revised proposal for treating 9,000 cubic yards of sludge.

Dear Mr. Houseknect.

Pursuant to our conversation on Wednesday, April 26, 1995 and my conversation with Mr. Gene Hill of Hammontree & Associates on that same day, The Critter Company is proposing to biologically remediate sludge material found in lagoons 1 and 2. The Critter Company proposes to split excavating and bioremediation activities into two separate payment schedules for Canton Drop Forge. The Critter Company proposes the following:

PHASE I. (Excavating of material and building biocell)

- 1) The Critter Company will recommend an excavator to remove sludge from lagoons 1 and 2.
- 2) If necessary, the excavator will provide bonding to Canton Drop Forge.
- 3) The excavator will be paid directly by Canton Drop Forge for work completed.

PHASE II. (Bioremediation and maintenance of biocell)

- 1) The Critter Company will oversee construction of the biocell.
- 2) The Critter Company will inoculate the biocell and lagoon linings with microorganisms specifically grown and cultivated for this site.

- 3) The Critter Company will be responsible for all treatments and tilling of soil on a weekly or by-weekly schedule in the months of April-October.
- 4) The Critter Company will continue to treat until a composite sample reaches 380 ppm or less of total petroleum hydrocarbons.
- 5) The Critter Company will be paid by Canton Drop Forge based on performance of reducing contamination levels.
- 6) The Critter Company and Canton Drop Forge will mutually agree on a payment schedule based on reduction of contamination levels.

Environmental Resources, Inc. and our parent company, The Critter Company, Inc. appreciate this opportunity to bid. Environmental Resources is currently licensed to do business in the State of Ohio. If chosen as the bioremediation contractor on this project, The Critter Company will register with the State of Ohio. The Critter Company carries 2 million dollars of liability insurance. All of our treatment specialists are OSHA 40-Hour Health and Safety trained. If you have any questions or need additional information, please feel free to contact me at (614) 431-8190, or Mr. Jerry Coon in our corporate headquarters at (800) 483-4284.

Sincerely,

THE CRITTER COMPANY, INC.

Scott Klingen

Scott Klingensmith

Project Coordinator

Portion of Contract 95-2A

June 1, 1995

The following items shall be considered to be part of the Canton Drop Forge Bioremediation contract documents.

EXCAVATION COORDINATION

All instruction and coordination regarding the excavation, transportation and placement of soil and sludge shall be the sole responsibility of the Bioremediation contractor. Invoices for excavation services shall be passed directly to CDF with no mark-up. Payment for excavation services shall be made by CDF directly to the excavation contractor. All invoices from the excavator shall be approved by the Critter Company prior to payment by CDF.

PROGRESS MONITORING AND PAYMENT

Monitoring shall be achieved by sampling the biocell contents and testing for TPH by EPA Method 418.1. Target levels of 380 mg/kg will be used for this project.

Progress sampling shall occur approximately once a month during summer months and once every two months during winter months. Each sampling session will consist of five (5) random samples from the biocell material. When the average TPH concentration of the five (5) samples is less than the appropriate level, and no single sample has a TPH concentration more than 15 percent (15%) above the treatment level, the appropriate payment will be made. PHC-DRO analysis will be performed on composite samples at the beginning, approximate middle, and end of treatment.

Payments shall be made based on the treatment level achieved.

After establishing initial contamination concentration with five (5) random samples, payments will be made according to the following:

HAMMONTREE & ASSOCIATES, LIMITED

w.progress

CONTRACT 95-2A

Ju-

FIRST 4,500 CY

Treatment Level (% reduction of TPH)	Payment, %
25%	18%
50%	9%
75%	9%
100%*	<u>9%</u>
Total	45%

SECOND 4,500 CY

Treatment Level (% reduction of TPH)	Payment, %		
25%	18%		
50%	9%		
75%	9%		
100%	9%		
Total	90%**		

HAMMONTREE & ASSOCIATES, LIMITED

W:progress

CONTRACT 95-2A

Juc

^{*}Target level of 380 mg/kg by EPA Method 418.1 is to be achieved, see section titled "Acceptance of Target Levels".

^{**}The final 10% payment will be made one month after achieving target levels, provided that a confirmatory set of lab results indicate that acceptable target levels have been achieved.

ACCEPTANCE OF TARGET LEVELS

Sampling sessions will consist of five (5) random samples from the biocell material. When four (4) of the five (5) random samples are below the target level of 380 mg/kg and the fifth random sample is not more then ten percent (10%) over the target level, treatment of the material within the biocell shall be considered conditionally complete. Three more random samples shall then be taken to verify treatment progress. If two (2) of the three (3) additional random samples have TPH levels less than or equal to 380 mg/kg and the third sample is not more than ten percent (10%) over the target level, treatment of the material within the biocell shall be considered complete and payment for that portion of the project paid.

REMOVAL OF SLUDGES AND SOIL FROM CDF SITE

No material from the CDF site shall be removed from CDF property without CDF consent. Should material removal be required for any reason, CDF materials shall not be mixed with <u>any</u> other materials (bulking, etc.) without CDF consent. The location and status of all materials leaving CDF shall be communicated with CDF as requested.

HAMMONTREE & ASSOCIATES, LIMITED

W.Drog/tees

CONTRACT 95-ZA

Juc

Canton Drop Forge Ex-Situ Bioremediation - Lagoon #1

April 1995

Item No	Item	Est'd Quantity	Unit	Separate Unit Prices (figures)		Combined Unit Prices (to be written in words)	Quantity Times Unit Total
				Mat ¹ L	Labor	Mat'l-Labor-Unit-Total	Amount
1.1	Removal of materials lining Lagoon 1	3,000	c.y.	N/A	\$5.50/cy	FIVE DOLLARS AND FICTY CENTS PER CUBIC YARDS	\$16,500
1.2	Transportation of materials from Lagoon 1 to biocell(s)	3,000	c.y.	N/A	\$5.80/cy	FIVE DOLLARS AND EIGHTY CENTS PER CUBIC YARDS	\$17,400
1.3	Construction of biocell(s) for Lagoon 1 materials	Lump	Lump	N/A	\$1,920	ONE-THOUSAND AND NINE HUNDRED AND TWENTY DOLLARS	\$ 1,920
1.4	Treatability study of materials in Lagoon 1	Lump	Lump	N/A	N/A	_	_
1.5	Bulking of materials from Lagoon 1 with on site materials if required*	1,000	c.y.	N/A	N/A	-	
1.6	Bulking of materials from Lagoon 1 with off site materials if required*	1,000	c.y.	N/A	N/A	-	
1.7	Inoculation of materials in Lagoon 1 biocell(s)**	3,000	c.y.	\$4.00/c.y.	\$8.00/c.y		\$36,000
1.8	Inoculation of Lagoon 1 lining after sludge removal	Lump	Lump	\$1,000	\$2,000	THREE THOUSAND DULARS	\$ 3,000
1.9	Site visits	30	Ea.	Included on	item	-	
	<u>.</u>				,		

If the contractor does not expect the use of bulking material please indicate by using N/A

- * All items may not be required. Unit process will still be useful in the event that all items are required.
- ** Inoculation costs shall be based on c.y. of material excavated from the Lagoon #1, not the bulked volume.

Sub-Total Lagoon No. 1 \$ 74,820.00

The Contractor agrees to complete all of the work specified for this contract within five hundred forty-eight (548) calendar days (one and one half years) after the date of Notice to Proceed. The bid prices shall include all labor, materials, equipment, overhead, profit, insurance, etc., to cover the finished work. Should contamination still exceed target levels (TPH≤380 ppm), after one and one half years, a meeting between CDF representatives and the contractor shall occur. Based on this meeting CDF will either.

1. Require that all contaminated material resulting from this project be excavated and moved off site for disposal (no further treatment) at a regulated landfill, at no cost to CDF.

OR

Allow the contractor six (6) additional months to achieve target levels at no cost to CDF. If after the six (6) month extension target levels have not been achieved. CDF may exercise Option 1. Should the landfilling option be exercised, the contractor must receive CDF approval of all proposed disposal activities prior to disposal. After disposal CDF shall receive documentation verifying proper disposal. If the Contractor does not submit an approved disposal plan within six (6) months of the formal decision to exercise Option 1, CDF may seek outside contractors to remove the TPH contaminated soil resulting from ex-situ bio-remediation attempts. If in-situ means are used, 3,000 c.y. from Lagoon #1 and 9,000 c.y. from Lagoon #2 shall be removed. CDF will bill the bio-remediation contractor for all disposal activities.

Bidder understands that Canton Drop Forge (CDF) reserves the right to reject any or all bids and waive any informalities in the bidding. The bidder agrees that this bid shall be good any may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Upon receipt of Notice of Award by CDF, bidder within 10 days and deliver a Surety Bond or Bonds the form of	s as required. The bid security attached in in the sum of
(\$) is to become the property of
CDF in the event the contract and bond are not eliquidated damages for the delay and additional exp	xecuted within the time above set forth, as
BIDDER acknowledges receipt of the following ADD	DENDUM:
Addendum No.	_, Dated
*See attached Proposal -15-	

U:\USR\SPECTEXT\LAGOON\BIDTOTAL.DOC

EXPERIENCE AND EQUIPMENT QUESTIONNAIKE

Have you, or your Company, or any organization of which you have been a responsible officer or agent, ever failed to complete any work awarded to you? If so, where and why?	
No	p.
	
	
	
The work awarded or to be awarded will have the personal supervision of whom?	
Mr. Jerry Coon of The Critter Company, Inc.	
·	
	ety
Explain approximately your plan and layout for performing the proposed work.	
The Critter Company, Inc. will oversee the construction of a	
that will encompass approximately 3 acres located between lag	oons 2 and 3.
The biocell will be constructed with on-site clean material.	A 3' wide
and 3' high dike will be built around the entire treatment c	ell.
Excavated sludge from the two lagoons will be placed into the	biocell.
The sludge will be spread to a thickness of 12" to 20" depend	ing on
soil conditions. A heavy inoculation of microorganisms will	be sprayed
on the bottom of the biocell prior to contaminated soil being	spread in
the treatment cell. The contaminated soil will be sprayed an	d tilled
on a weekly or by-weekly basis until contamination levels have	e reached
closure levels. Lagoon bottoms will also be lined with micro after material has been 19 excavated.	organisms

2(6)

THE CRITTER COMPANY Biological Remediation of Hydrocarbons

6890 E. Sunrise Drive, #120-10 Tucson, Arizona 85715 (520) 299-9808

G64

RECEIVED

JUN 6 1995

June 2, 1995

Mr. Gene Hill Hammontree & Associates, LTD. 5233 Stoneham Rd. North Canton, Ohio 44720

CANTON DROP FORGE

RE: Canton Drop Forge Bioremediation Project.

Dear Gene,

The following is a response to your comments and questions regarding the Canton Drop Forge bioremediation project as outlined in your letter on May 19, 1995.

1. TIME FRAME:

- A. To better serve Canton Drop Forge, The Critter Company has already designed and manufactured over 200 lbs. of oil eating microbes to start this project. Additional microbes will be grown on-site throughout the duration of the project.
- B. Upon signing of the contract, The Critter Company will have Beaver Excavating build the Bio-Cell. This will take 2 to 3 days. Work can commence within 5 days of signing of the contract.
- C. The Critter Company will then seed the bottom of the Bio-Cell with nutrients and oil eating microbes prior to any material from Lagoons 1 or 2 entering the cell. Beaver Excavating will then proceed to excavate sludge material from Lagoon 1, transport material to the Bio-Cell, and spread it out over the Bio-Cell. It will take approximately 2 weeks to build the Bio-Cell and completely empty Lagoon 1.
- D. If additional space exists in the Bio-Cell, The Critter Company, with permission from Canton Drop Forge, will have Beaver Excavating transport the material from Lagoon 2 into the Bio-Cell until it has reached full capacity. The Critter Company and Beaver Excavating estimate that no more than 4,500 cubic yards will fit into the Bio-Cell. Contaminated soils will be spread throughout the Bio-Cell at a depth of 18-22 inches. A 3 foot dike will be constructed around the entire cell to prevent run-off.

JUN 6 1995

CANTON DROP FORGE

2. WORK PLAN & SCHEDULE:

- A. Pumping The Critter Company asks that Canton Drop Forge remove as much of the water from Lagoons 1 and 2 out as possible prior to Beaver Excavating removing sludge material.
- B. Rain Unless several inches of rain falls within a 24-48 hour period, we do not foresee weather adversely affecting removal of sludge.
- C. Layout of Bio-Cell The layout and location of the Bio-Cell will be dependent upon how much land can be allocated by Canton Drop Forge for this project. The Critter Company will ask Keith Houseknect or an other representative from Canton Drop Forge be on-site during the building of the Bio-Cell in order to mark boundaries for the excavation crew. Currently, several large pieces of CDF equipment occupy the space where the Bio-Cell will be constructed. Therefore, The Critter Company cannot outline the exact boundaries of the cell at this time. However, it is our understanding from Keith Houseknect that the cell can be constructed around each piece of equipment.

D. Time Frame:

- -2 Weeks to build Bio-Cell and empty Lagoon 1 and part of Lagoon 2.
- -Bioremediation treatments will be made approximately once a week.
- -Tilling or turning over soil will be done approximately once a week.
- -Sampling will be conducted once a month by Hammontree & Associates.
- -Treatment process for the first 4,500 cubic yards should take between 3-6 months of warm weather.
- -The second 4,500 cubic yards will follow the same schedule.
- 3. **PERMITTING:** Permitting will not be necessary for the bioremediation portion of this project.
- 4. BULKING: While The Critter Company does not anticipate to bulk any sludge material with native soils, we will need to add between 1/2 1 1/2 tons of a fertilizer and nutrient mixture.
- 5. SAMPLING AND ANALYSIS: The Critter Company requests that the EPA 418.1 method be run in conjunction with a GC method. We have two concerns about the 418.1 method. First, this method has a long history of yielding unpredictable and unreliable results. The Critter Company can provide documentation of the problems surrounding 418.1. Second, this method is expected to be abolished before the end of this project.

JUN. 6 1995

Page 3

CANTON DROP FORGE

If you have any questions or need additional information, please do not hesitate to call me at (614) 431-8190 or Jerry Coon at (520) 299-9808.

Sincerely,

THE CRITTER COMPANY, INC.

Scott Klingensmith Project Coordinator

I HE BEAVER EXCAVATING COMPANT



July 18, 1995

Canton Drop Forge 4575 Southway St. S.W. Canton, OH 44706

Attn: Keith Housekneght

Removal and Bioremediation of the Sludge Lining Lagoons #1 & #2

Gentlemen:

As you are aware, dewatering of Pond #2 has been a time consuming effort by both Canton Drop Forge and Beaver Excavating.

Contractually we are not obligated to dewater the pond but have contributed our efforts to help expedite the pond cleaning.

As of today there is still some water and free product (oil sludge) remaining in the bottom of the pond. We have begun to excavate the sides of the pond this morning.

Please note that due to the present condition of the pond, i.e.; water and free product remaining in pond, process water continuously draining into pond, and the pervious sand and gravel bottom and sides, that Beaver Excavating will not be responsible for release of water or free product into subsoil pond bottom or sides.

If you have any questions, please feel free to call.

Thank you,

Stanley R. Evans Project Manager



4650 Southway S.W. • P.O. Box 6059 - Canton, Ohio 44706 216 478-2151 FAX 216 478-2122

2(5)

MAY 2 4 1995
CANTON DROP FORGE

EXCAVATION COORDINATION

All instruction and coordination regarding the excavation, transportation and placement of soil and sludge shall be the sole responsibility of the Bioremediation contractor. Invoices for excavation services shall be passed directly to CDF with no mark-up. Payment for excavation services shall be made by CDF directly to the excavation contractor. All invoices from the excavator shall be approved by the Critter Company prior to payment by CDF.

PROGRESS MONITORING AND PAYMENT

Monitoring shall be achieved by sampling the biocell contents and testing for TPH by EPA Method 418.1. Target levels of 380 mg/kg will be used for this project.

Progress sampling shall occur approximately once a month during summer months and once every two months during winter months. Each sampling session will consist of five (5) random samples from the biocell material. When the average TPH concentration of the five (5) samples is less than the appropriate level, <u>and</u> no single sample has a TPH concentration more than 15 percent (15%) above the treatment level, the appropriate payment will be made. PHC-DRO analysis will be performed on composite samples at the beginning, approximate middle, and end of treatment.

Payments shall be made based on the treatment level achieved.

After establishing initial contamination concentration with five (5) random samples, payments will be made according to the following:

FIRST 4,500 CY

Treatment Level (% reduction of TPH)	<u>Paγment, %</u>		
25%	18%		
50%	9%		
75%	9%		
100%*	9%		
Total	45%		

SECOND 4,500 CY

MAY 2 4 1995

CANTON DROP FORGE

Treatment Level (% reduction of TPH)	Payment, %
25%	18%
50%	9%
75%	9%
100%	<u>_9%</u>
Total	90%**

^{*}Target level of 380 mg/kg by EPA Method 418.1 is to be achieved, see section titled "Acceptance of Target Levels".

ACCEPTANCE OF TARGET LEVELS

Sampling sessions will consist of five (5) random samples from the biocell material. When four (4) of the five (5) random samples are below the target level of 380 mg/kg and the fifth random sample is not more then ten percent (10%) over the target level, treatment of the material within the biocell shall be considered conditionally complete. Three more random samples shall then be taken to verify treatment progress. If two (2) of the three (3) additional random samples have TPH levels less than or equal to 380 mg/kg and the third sample is not more than ten percent (10%) over the target level, treatment of the material within the biocell shall be considered complete and payment for that portion of the project paid.

REMOVAL OF SLUDGES AND SOIL FROM CDF SITE

No material from the CDF site shall be removed from CDF property without CDF consent. Should material removal be required for any reason, CDF materials shall not be mixed with <u>any</u> other materials (bulking, etc.) without CDF consent. The location and status of all materials leaving CDF shall be communicated with CDF as requested.

w:mary/progress

^{**}The final 10% payment will be made one month after achieving target levels, provided that a confirmatory set of lab results indicate that acceptable target levels have been achieved.

INVOICE

H. JAMES HAMMONTREE, P.E.; P.S. LAWRENCE D. PHILLIPS, P.E., P.S. CHARLES F. HAMMONTREE, P.E., P.S.

> Canton, Ohio 44706 Attn: Keith Houseknecht

BRUCE M. BAIR, P.E., P.S.

RONALD F. DOHY, P.S.

GARY L. TOUSSANT, P.S.

JOSE E. TOLEDO, P.E., P.S.

RICHARD R. COOK, P.E., P.S.

JAMES C. BOLLIBON, P.E., P.S.

KEITH A. BENNETT, P.E., P.S.

BARBARA H. BENNETT, P.E., P.S.

HAMMONTREE & ASSOCIATES, LIMITED

Consulting Engineers - Planners - Surveyors

TREEMORE BUILDING **5233 STONEHAM ROAD** NORTH CANTON, OHIO 44720

PHONE (216) 499-8817 FAX (216) 499-0149 TOLL FREE 1-800-394-8817

MICHAEL L. DECKER, P.S. RICHARD J. FAULHABER, P.E., P.S. GREGORY E. MENCER, A.P.A. DANIEL J. GRINSTEAD, P.E. MARK E. FRANZEN, P.E. KARL J. OPRISCH, P.E. JEFFREY L. SPRAY, P.S. PAUL A. TOMIC, P.S. WILLIAM N. CLARK, P.E., P.S. THOMAS J. KING, P.S. DOMINIC A. MARTUCCIO, P.E., P.S. PAUL A. MILLER, P.S.

	Invoice No. 95-416
Canton Drop Forge	
P.O. Box 6902	DateApril 1, 1995
4575 Southway Street, S.W.	

For professional services rendered for the month of March 1995. The services include preparation of bidding specifications for the closure of Lagoon #1.

6.0	hours	@	\$84.00	per hour	=	\$504.00
3.0	hours	<u>a</u>	60.00	per hour	=	180.00
1.5	hours	<u>@</u>	21.00	per hour	=	180.00 31.50 \$715.50
				Total	=	\$715.50
	3.0	3.0 hours	3.0 hours @	3.0 hours @ 60.00	3.0 hours @ 60.00 per hour 1.5 hours @ 21.00 per hour	3.0 hours @ 60.00 per hour = 1.5 hours @ 21.00 per hour =

*Engineer's Certification: I certify that this work was for the design and construction of the Industrial Pretreatment program to replace Lagoon #1 and 2 as recommended by the Phase II Audit and to treat processed water upon the closures of Lagoons #1 and 2. The charges are necessary steps as prerequisites to the installation of a new water pretreatment system.

Lawrence D. Phillips, P.E., P.S.

Summary:

PO# 092310

Authorized \$15,848.00 18,000.00 Requested Revision 17,466.62 Work completed-to-date 16,761.12 Less previous billing 715.50 Now due

> TERMS: Net 30 days, 1% service charge (APR of 12%) will be added each month Pay from this invoice - statements not issued.

R. JAMES HAMMONTREE, P.E., P.S. BRUCE M. BAIR, P.E., P.S. LAWRENCE D. PHILLIPS, P.E., P.S. CHARLES F. HAMMONTREE, P.E., P.S. RONALD P. DOHY, P.S. GARY L. TOUSSANT, P.S. JOSE E. TOLEDO, P.E., P.S. RICHARD R. COOK, P.E., P.S. JAMES C. BOLLIBON, P.E., P.S. KEITH A. BENNETT, P.E., P.S. BARBARA H. BENNETT, P.E., P.S.

HAMMONTREE & ASSOCIATES, LIMITED 3 Consulting Engineers . Planners . Surveyors

TREEMORE BUILDING **5233 STONEHAM ROAD** NORTH CANTON, OHIO 44720

PHONE (216) 499-8817 FAX (216) 499-0149 TOLL FREE 1-800-394-8817 MICHAEL L. DECKER, P.S. RICHARD J. FAULHABER, P.E., P.S. GREGORY E. MENCER, A.P.A. DANIEL J. GRINSTEAD, P.E. MARK E. FRANZEN, P.E. KARL J. OPRISCH, P.E. JEFFREY L. SPRAY, P.S. PAUL A. TOMIC, P.S. WILLIAM N. CLARK, P.E., P.S. THOMAS J. KING, P.S. DOMINIC A. MARTUCCIO, P.E., P.S. PAUL A. MILLER, P.S.

Canton Drop Forge P.O. Box 6902 4575 Southway Street, S.W. Canton, Ohio 44706 Attn: Keith Houseknecht

Invoice No. April <u>1, 1995</u>

95-415

For professional services rendered for the month of March 1995. The services include preparation of bidding specifications for the Industrial Pretreatment System.

Principal Engineer	30.0	hours	@	\$84.00	per hour	==	\$2,520.00
Engineer	8.0	hours	<u>@</u>	60.00	per hour	=	420.00
Clerical	11.0	hours	<u>@</u>	21.00	per hour	. =	231.00
AA Blueprinting Co.			•		_	=	16.04
					Total	=	3,187.04

*Engineer's Certification: I certify that this work was for the design and construction of the Industrial Pretreatment program to replace Lagoon #1 and 2 as recommended by the Phase II Audit and to treat processed water upon the closures of Lagoons #1 and 2. The charges are necessary steps as prerequisites to the installation of a new water pretreatment system.

Lawrence D. Phillips, P.E., P.S.

Summary:

PO# Pending

Work completed-to-date

Previous billings

\$5,500.04

2,313.00 Total amount now due \$3,187.04

> TERMS: Net 30 days. 1% service charge (APR of 12%) will be added each month Pay from this invoice - statements not issued.

R. JAMES HAMMONTREE, P.E., P.S.
BRUCE M. BAIRI, P.E., P.S.
LAWRENCE D. PHILLIPS, P.E., P.S.
CHARLES F. HAMMONTREE, P.E., P.S.
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BARBARA H. BENNETT, P.E., P.S.

HAMMONTREE & ASSOCIATES, LIMITED Consulting Engineers - Planners - Surveyors

TREEMORE BUILDING 5233 STONEHAM ROAD NORTH CANTON, OHIO 44720

PHONE (216) 499-8817 FAX (216) 499-0149 TOLL FREE 1-800-394-8817 MICHAEL L. DECKER, P.9.
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THOMAS J. KING, P.S.
DOMINIC A. MARTUCCIO, P.E., P.S.
PAUL A. MILLER, P.S.

Canton Drop Forge P.O. Box 6902 4575 Southway Street, S.W. Canton, Ohio 44706 Attn: Keith Houseknecht Invoice No. ______95-417

Date April 1, 1995 _____

For professional services rendered for the month of March 1995. The services include final report preparation of the sampling and testing results for Lagoon #2. The services also include preparation of bidding specifications for closure.

Principal Engineer	2.0	hours	@	\$84.00	per hour	=	\$168.00	
Engineer	6.0	hours	@	60,00	per hour	=	360.00	
Technician	7.0	hours	· @	45.00	per hour	=	315.00	1
Clerical	5.5	hours	ā,	21.00	per hour	=	115.50	141
			_		Total	=	\$958.50	15
				•				7

*Engineer's Certification: I certify that this work was for the design and construction of the Industrial Pretreatment program to replace Lagoon #1 and 2 as recommended by the Phase II Audit and to treat processed water upon the closures of Lagoons #1 and 2. The charges are necessary steps as prerequisites to the installation of a new water pretreatment system.

Lawrence D. Phillips, P.E., P.S.

Summary: PO# 0923089

Authorized \$12,980.00 Requested Revision 15,000.00 Work completed-to-date 14,724.74 Less previous billing 13,766.24

Now due ERMS: Net 30 days. 1% service charge (APR of 12%) will be added each month Pay from this invoice - statements not issued.

HAMMONTREE & ASSOCIATES, LIMITED

RECORD	OF TEL	EPHONE	CALL

PROJECT BIOREMEDIATION

TELEPHONE NO. 530-299-9808

FAX NO.

то	Jerry	Coons	OF	Critter Co.
FROM_	Co/14	· · · · · · · · · · · · · · · · · · ·	OF	H&A

SUBJECT DISCUSSED

ACTION TO BE TAKEN

STATUS

- 1. STILL TREATING
- 2. MAY WANT TO SAMPLE IN ABOUT I WIEEKS
- 3. BIO-CELL TO BE "TURNED" SATURDAY THE 16 OR SAT SEPT. 23.
- 4. HE HAS ATTORNEY TRYING TO GET CHANGE ORDER PROCESSED HIS ATTORNEY HAS BEEN IN CONTACT W/CDF'S ATTORNEY
 - 5. 4-5 INOCCULATIONS TO DATE
 - CO. THEY ARE TRYING TO STIMULATE OIL EATING
 BUGS AND NOT STIMULATE THE MON-OIL
 EATERS.

Mr. Jerry Coon September 29,1995 Page 2

CHANGE ORDER - BIO-LAG 1-1, ITEM 2

In the January 6, 1995, letter from TCC to Hammontree & Associates it is clear that TCC intended to be the party responsible for all earthmoving and watering during the project. In the report titled "Lagoon #1 Sludge Disposal/Treatment Options", page 4 lists tilling of the biocell as part of TCC responsibilities. This statement was included in the report as a result of the January 6, 1995 letter. The Critter Company received a copy of this report and was aware of each parties responsibilities during the project.

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Items 5 and 6 in the April 28, 1995 Critter Company letter indicated TCC's acceptance of performance based payments and the need for a mutually agreeable payment schedule. As requested by TCC and agreed to by Canton Drop Forge, payments based on performance were used in lieu of a standard performance bond which you could or would provide.

Direct payment to an "aeration contractor" is not acceptable. The tilling is included in your bid price of \$12/c.y. as listed on page 13 of Contract 95-2. Changes in this cost may be adjusted as described in the Section title "CHANGE ORDER: BIO-LAG 1-1, ITEM 1" of this letter.

CHANGE ORDER: BIO-LAG 1-2, ITEM 1

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TCC was given samples of both the lining material and the material from the center of the sludge layer. TCC did not test these samples for TPH.

We feel it was TCC's responsibility to verify contamination levels during the bidding phase. Page 4 of "Lagoon #1 Sludge Disposal/Treatment Options" does indicate that Hammontree & Associates is to sample as

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Mr. Jerry Coon September 29,1995 Page 3

required by TCC during remediation, however, Page 1 of Contract 95-2A further clarifies that initial contamination concentrations shall be established by five (5) random samples from the biocell material.

CHANGE ORDER: BIO-LAG 1-2, ITEM 2

The time frame of two years for the completion of the project is not critical as far as Hammontree & Associates is concerned. However, Canton Drop Forge may have concerns that we are unaware of. I will have to consult with Canton Drop Forge representatives prior to commenting further on this issue.

CHANGE ORDER: BIO-LAG 1-2, ITEM 3

No comment required.

CHANGE ORDER: BIO-LAG 1-2, ITEM 4

No comment required.

PAYMENT SCHEDULE

There is no justification for altering the payment schedule. The payment schedule in Contract 95-2A is very clear and was mutually agreed upon. This type of payment schedule was requested by TCC in lieu of a performance bond. The only payments that fall outside of this schedule will be for work that is not covered in the contract documents.

Sincerely.

HAMMONTREE & ASSOCIATES, LIMITED

Gene G. Hill, E.I.T., M.S.

cc: Canton Drop Forge

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Post-It™ brand fax transmittal memo 7671 # of pages > 3

To Keill House Kucht From Gene H. H.

Co. @DF Co. HAMAR Tree

Dept. Phone # 499-8817

Fax# 477-2046 Fax# 499-8149

September 29, 1995

The Critter Company 6890 East Sunrise Drive #120-10 Tucson, Arizona 85715

Attention:

Jerry Coon

Subject:

Change Order requests

dated September 20, 1995

Change Order Number: BIO-LAG 1-1 Change Order Number: BIO-LAG 1-2

Payment Schedule

The following sections will address each item in your September 20, 1995 letter in order.

CHANGE ORDER - BIO-LAG 1-1, ITEM 1

The source of the debris currently in the bio-cell has not been demonstrated. The site of the bio-cell may be a possible source of foreign objects. Regardless of the origin of the debris, it may represent a subsurface condition which is "of an unusual, and differs materially from conditions ordinarily encountered and generally recognized as inherent in the work of the character provided in the Contract Documents" (4.2.3.4).

I will need to discuss this matter with CDF personnel prior to reaching a final position on this subject. However, this item does appear to have some potential merit.

THE CRITTER COMPANY Biological Remediation of Hydrocarbons

2(c) 3

6890 E. Sunrise Drive, #120-10, Tucson, Arizona 85715 (520) 299-9808

STATEMENT

Date of Invoice: July 26, 1995

Reference: Contract Agreement 95-2A, Paragraphs 4 and 5.

Terms: Net

1) "Seeding" of Lagoon #1 with microorganisms and nutrients.

TOTAL DUE: \$ 3,000.00 (Total due deducted from contract cost of \$117,000.00)

Thank you.

Please remit check payable to: THE CRITTER COMPANY, INC. 6890 E. SUNRISE DRIVE, #120-10, TUCSON, ARIZONA 85715

Sincerely,

2(a)

Biological Remediation of Hydrocarbons

6890 E. Sunrise Drive, #120-10, Tucson, Arizona 85715 (520) 299-9808

STATEMENT

Date of Invoice: July 26, 1995

Order: verbal addition to Contract Agreement 95-2A

Terms: Net

1) Inoculated approximately 200-300 cubic yards of soil around the east and south rim of Lagoon #1 to eliminate further excavation and trucking of material to the "Bio-Cell". Further periodical inoculations to be performed at no charge for duration of project.

TOTAL DUE: \$ 1,800.00 (\$9.00 per cubic yard of soil)

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THE CRITTER COMPANY Biological Remediation of Hydrocar

2(a) 3

6890 E. Sunrise Drive, #120-10 Tucson, Arizona 85715 (520) 299-9808

April 28, 1995

Mr. Keith Houseknect Canton Drop Forge 4575 Southway Street, S.W. P.O. Box 6902 Canton, Ohio 44706

RE: Revised proposal for treating 9,000 cubic yards of sludge.

Dear Mr. Houseknect,

Pursuant to our conversation on Wednesday, April 26, 1995 and my conversation with Mr. Gene Hill of Hammontree & Associates on that same day, The Critter Company is proposing to biologically remediate sludge material found in lagoons 1 and 2. The Critter Company proposes to split excavating and bioremediation activities into two separate payment schedules for Canton Drop Forge. The Critter Company proposes the following:

PHASE I. (Excavating of material and building biocell)

- 1) The Critter Company will recommend an excavator to remove sludge from lagoons 1 and 2.
- 2) If necessary, the excavator will provide bonding to Canton Drop Forge.
- 3) The excavator will be paid directly by Canton Drop Forge for work completed.

PHASE II. (Bioremediation and maintenance of biocell)

- 1) The Critter Company will oversee construction of the biocell.
- 2) The Critter Company will inoculate the biocell and lagoon linings with microorganisms specifically grown and cultivated for this site.

- 3) The Critter Company will be responsible for all treatments and tilling of soil on a weekly or by-weekly schedule in the months of April-October.
- 4) The Critter Company will continue to treat until a composite sample reaches 380 ppm or less of total petroleum hydrocarbons.
- 5) The Critter Company will be paid by Canton Drop Forge based on performance of reducing contamination levels.
- 6) The Critter Company and Canton Drop Forge will mutually agree on a payment schedule based on reduction of contamination levels.

Environmental Resources, Inc. and our parent company, The Critter Company, Inc. appreciate this opportunity to bid. Environmental Resources is currently licensed to do business in the State of Ohio. If chosen as the bioremediation contractor on this project, The Critter Company will register with the State of Ohio. The Critter Company carries 2 million dollars of liability insurance. All of our treatment specialists are OSHA 40-Hour Health and Safety trained. If you have any questions or need additional information, please feel free to contact me at (614) 431-8190, or Mr. Jerry Coon in our corporate headquarters at (800) 483-4284.

Sincerely,

THE CRITTER COMPANY, INC.

Scott Klingen

Scott Klingensmith

Project Coordinator





2(4)

February 22, 1996

Mr. Jerry Coon 6890 E. Sunrise Drive, #120-10 Tucson, Arizona 85715

Dear Mr. Coon:

With the spring season approaching, I would appreciate you advising me of your anticipated schedule for bioremediation treatments and tilling. Based on Scott Klingensmith's prior communication I have been planning on an April start date with treatments and tilling weekly or bi-weekly thereafter.

I am also interested in your plan for inoculations of the 200-300 cubic yards of material close to lagoon #1, your plan for bulking or draining the low areas of the bio-cell, and your plan for the hydrogen peroxide. If you do not anticipate using the hydrogen peroxide I would like to have the tanks and liquid removed because of the safety issues related to concentrated hydrogen peroxide.

Through the year, please let me know when you or your employees arrive on site and what is being accomplished. Call me if I can assist you in arranging for the spring startup.

Sincerely,

Keith J. Houseknecht

CDF001023



CANTON DROP FORGE

February 22, 1996

OVER

Mr. Jerry Coon 6890 E. Sunrise Drive. #120-10 Tucson, Arizona 85715

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Through the year, please let me know when you or your employees arrive on site and what is being accomplished. Call me if I can assist you in arranging for the spring startup.

Sincerely,

Keith J. Houseknecht

CDF001024





March 14, 1996

Mr. Jerry Coon 6890 E. Sunrise Drive, #120-10 Tucson, Arizona 85715

Dear Mr. Coon:

Vulcan Peroxidation Systems, Inc. has been in contact with me in regard to removal of the hydrogen peroxide and associated tanks. They expressed some concern about getting rid of the unused material. I told them that the details of the procedure and timing must be directed by you.

I was out to the cell on March 13 and was able to walk around on the material without sinking in. The areas that were wet last year are still wet. I am anxious to hear back from you as to the schedule for the year.

Sincerely

Keith J. Houseknecht





DAN WEIDT PEROXIDATION SYSTEMS ENC.
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VISITED SITE COF 3/14/86
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Keith TOLD Him to WORK OUT DETAILS - WITH
JURRY COON
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J. CURTISS & ASSOCIATES 524 Parkway View Drive Pittsburgh, PA 15205 Phone: 412/788-1550

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	DESCRIPTION	OF	SERVICES	

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Promo Brush Presum 25,315

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September 29, 1995

The Critter Company 6890 East Sunrise Drive #120-10 Tucson, Arizona 85715

Attention:

Jerry Coon

Subject:

Change Order requests dated September 20, 1995

Change Order Number: BIO-LAG 1-1 Change Order Number: BIO-LAG 1-2

Payment Schedule

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Mr. Jerry Coon September 29,1995 Page 2

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Mr. Jerry Coon September 29,1995 Page 3

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CHANGE ORDER: BIO-LAG 1-2, ITEM 3

No comment required.

CHANGE ORDER: BIO-LAG 1-2, ITEM 4

No comment required.

PAYMENT SCHEDULE

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Gene G. Hill, E.I.T., M.S.

cc: Canton Drop Forge

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